

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:  
an image carrier which retains an electrostatic  
latent image corresponding to an original image;

5 a developing device which sticks a toner to the  
electrostatic latent image to develop a toner image on  
the image carrier;

an intermediate transferrer to which the toner  
image on the image carrier is transferred;

10 a secondary transfer roller which transfers the  
toner image on the intermediate transferrer onto paper;  
and

a cleaning member which cleans the secondary  
transfer roller;

15 wherein the secondary transfer roller can  
move to a first position to contact the intermediate  
transferrer, and to a second position to be separated  
from the intermediate transferrer, and the secondary  
transfer roller contacts the cleaning member when being  
20 located at the second position.

2. An image forming apparatus comprising:

an image carrier which retains an electrostatic  
latent image corresponding to an original image;

25 a developing device which sticks a toner to the  
electrostatic latent image to develop a toner image on  
the image carrier;

an intermediate transferrer which transfers the

toner image on the image carrier;

a secondary transfer roller which transfers the toner image on the intermediate transferrer onto paper;

5 a cleaning member which cleans the secondary transfer roller;

an application section which, when a jam is caused in conveyance of the paper, repeatedly applies positive and negative bias voltages to the secondary transfer roller after the paper is removed, and moves the toner on the secondary transfer roller to the intermediate transferrer; and

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a rotational driving section which rotationally drives the secondary transfer roller and the cleaning member so that their peripheral velocities and direction thereof will be the same at a contact position where the secondary transfer roller contacts the cleaning member in an ordinary operation, and that the peripheral velocities will be different when the jam is caused.

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20 3. The image forming apparatus according to claim 2, wherein the application section applies the same potential to the cleaning member and the secondary transfer roller.

25 4. The image forming apparatus according to claim 3, wherein the cleaning member includes a brush, and a material of the brush is conductive fiber having an electric resistance ranging from  $10^5 \Omega$  to  $10^8 \Omega$ .

5. The image forming apparatus according to claim 2, wherein the cleaning member is configured to be in an electrically floating state.

5 6. The image forming apparatus according to claim 5, wherein the cleaning member includes a brush, and a material of the brush comprises conductive fiber.

7. The image forming apparatus according to claim 2, having an auxiliary member which cleans the cleaning member.

10 8. The image forming apparatus according to claim 7, wherein the cleaning member and the auxiliary member include brushes, and  $L1 \leq 1.5 \times L2$  is satisfied, where  $L1$  (mm) is a fiber length of the cleaning member, and  $L2$  (mm) is a fiber length of the auxiliary member.

15 9. The image forming apparatus according to claim 7, wherein the cleaning member and the auxiliary member include brushes, and  $D1 \leq 2 \times D2$  is satisfied, where  $D1$  (number/inch<sup>2</sup>) is a fiber density of the cleaning member, and  $D2$  (number/inch<sup>2</sup>) is a fiber density of the auxiliary member.

20 10. The image forming apparatus according to claim 7, wherein the cleaning member and the auxiliary member include brushes, and  $Y1 \leq 1.5 \times Y2$  is satisfied, where  $Y1$  (N/mm<sup>2</sup>) is Young's modulus of the fiber of the cleaning member, and  $Y2$  (N/mm<sup>2</sup>) is Young's modulus of the fiber of the auxiliary member.

11. The image forming apparatus according to

claim 7, wherein the cleaning member and the auxiliary member include brushes, and the cleaning member has a smaller fiber thickness than that of the auxiliary member.

5           12. An image forming apparatus comprising:

          an image carrier which retains an electrostatic latent image corresponding to an original image;

          a developing device which sticks a toner to the electrostatic latent image to develop a toner image  
10       on the image carrier;

          an intermediate transferrer which transfers the toner image on the image carrier;

          a secondary transfer roller which transfers the toner image on the intermediate transferrer onto paper;

15       a cleaning member which cleans the secondary transfer roller;

          a shutter member provided between the cleaning member and the secondary transfer roller;

          an application section which, when a jam is caused  
20       in conveyance of the paper, repeatedly applies positive and negative bias voltages to the secondary transfer roller after the paper is removed, and moves the toner on the secondary transfer roller to the intermediate transferrer; and

25       a rotational driving section which rotationally drives the secondary transfer roller and the cleaning member so that their peripheral velocities and

direction thereof will be the same at a contact position where the secondary transfer roller contacts the cleaning member in an ordinary operation, and that the peripheral velocities will be different when the jam is caused.

5           13. The image forming apparatus according to claim 12, wherein the shutter member can be moved, and is disposed so that the secondary transfer roller is out of contact with the cleaning member in the  
10 ordinary operation, and after the application section has completed the voltage application to handle the jam caused, the shutter member is disposed so that the secondary transfer roller contacts the cleaning member, and the toner remaining on the secondary  
15 transfer roller is cleaned by the cleaning member.